**WHAT IS CLAIMED IS:**

1. A power amplification apparatus for amplifying a baseband signal with a peak-to-average power ratio (PAR), comprising:

a main amplification part for detecting envelope values of an input baseband signal, reducing a peak signal having an envelope value more than a predetermined value to a signal having the predetermined value or less, and amplifying the reduced signal;

an error correction amplification part for amplifying an error signal indicating a difference between the baseband signal and the reduced signal; and

a summing part for combining the amplified reduced signal and the amplified error signal.

2. The power amplification apparatus as set forth in claim 1, wherein the main amplification part further comprises:

a quadrature modulator for modulating the reduced signal; and

a power amplifier for amplifying the quadrature modulated signal.

3. The power amplification apparatus as set forth in claim 1, wherein the main amplification part comprises:

an envelope detector for detecting an envelope value from the baseband signal;

a scale factor decider for deciding a scale factor for clipping the baseband signal by a difference between the detected envelope signal and a predetermined reference value when the detected signal envelope is above the predetermined reference value; and

a peak reduced signal generator for multiplying the baseband signal by the scale factor and generating the reduced signal

4. The power amplification apparatus as set forth in claim 1, wherein the main amplification part further comprises:

a delay device for delaying the baseband signal and providing the delayed baseband signal to the peak reduced signal generator.

5. The power amplification apparatus as set forth in claim 3, wherein the main amplification part further comprises:

a delay device for delaying the peak reduced signal by a predetermined time and providing the delayed peak reduced signal to the quadrature modulator.

6. The power amplification apparatus as set forth in claim 1, wherein the error correction amplification part further comprises:

a quadrature modulator for modulating the error signal; and

a power amplifier for amplifying the modulated signal.

7. The power amplification apparatus as set forth in claim 1, wherein the error correction amplification part further comprises:

an error compensator for compensating for amplitude, phase and delay of the quadrature modulated error signal and providing a result of the compensation to the power amplifier.

8. The power amplification apparatus as set forth in claim 1, wherein the error correction amplification part comprises:

an error signal generator for subtracting the reduced signal from the baseband signal to generate the error signal.

9. The power amplification apparatus as set forth in claim 8, wherein the error correction amplification part further comprises:

a delay device for delaying the baseband signal and providing the delayed baseband signal to the error signal generator.

10. The power amplification apparatus as set forth in claim 1, wherein the predetermined value is decided so that a PAR of the baseband signal is reduced and hence an error rate and spectral regrowth due to the PAR can be minimized.

11. The power amplification apparatus as set forth in claim 1, wherein the combined signal from the summing part is filtered in a radio frequency band to be transmitted and the filtered signal is transmitted through an antenna.

12. The power amplification apparatus as set forth in claim 1, wherein the error correction amplification part comprises:

a delay device for delaying the baseband signal;

an error signal generator for subtracting the reduced signal from the delayed baseband signal to generate the error signal;

a quadrature modulator for modulating the error signal and generating a quadrature modulated signal in a radio frequency band;

an error compensator for compensating phase and delay of the quadrature modulated signal so that an amplification characteristic difference between the main

amplification part and the error correction amplification part can be compensated; and

a power amplifier for amplifying the compensated signal and outputting the second amplified signal.

13. A method for improving the efficiency of a power amplifier amplifying a baseband signal with a peak-to-average power ratio (PAR), comprising the steps of:

(a) detecting an envelope values of an input baseband signal, reducing a peak signal having an envelope value more than a predetermined value to a signal having the predetermined value or less, and amplifying the reduced signal;

(b) amplifying an error signal indicating a difference between the baseband signal and the reduced signal; and

(c) combining the amplified reduced signal and the amplified error signal.

14. The method amplifying the reduced signal as set forth in claim 13, wherein the step (a) further comprises the steps of:

(a-1) modulating the reduced signal to a quadrature modulated signal; and

(a-2) amplifying the quadrature modulated signal.

15. The method amplifying the reduced signal as set forth in claim 13, wherein the step (a) comprises the steps of:

(a-3) detecting an envelope values from the baseband signal;

(a-4) deciding a scale factor for clipping the baseband signal by a difference between the detected envelope values and a predetermined reference value when the detected envelope is above the predetermined reference value; and

(a-5) multiplying the baseband signal by the scale factor and generating the reduced signal.

16. The method amplifying the error signal as set forth in claim 13, wherein the step (b) further comprises the steps of:

(b-1) modulating the error signal ; and

(b-2) amplifying the modulated error signal.

17. The method amplifying the error signal as set forth in claim 16, wherein the step (b) further comprises the step of:

(b-3) before the quadrature modulated signal is amplified, compensating for amplitude, phase and delay of the quadrature modulated error signal.

18. The method amplifying the error signal as set forth in claim 13, wherein the step (b) comprises the step of:

(b-4) subtracting the reduced signal from the baseband signal to generate the error signal.

19. The method as set forth in claim 13, wherein the predetermined value is decided so that the PAR of the baseband signal is reduced and hence an error rate and spectral regrowth due to the PAR can be minimized.

20. The method combining the amplifying reduced signal and the amplifying error signal as set forth in claim 13, wherein a the combined signal is filtered in a radio frequency band to be transmitted and the filtered signal is transmitted through an antenna.

21. The method as set forth in claim 13, wherein the step (b) comprises the steps of:

(b-1) delaying the baseband signal;

(b-2) subtracting the reduced signal from the delayed baseband signal to generate the error signal;

(b-3) a quadrature modulating the error signal and generating a quadrature modulated signal in a radio frequency band;

(b-4) compensating phase and delay of the quadrature modulated signal so that an amplification characteristic difference between the step (a) and the step (b) can be compensated; and

(b-5) amplifying the compensated signal and outputting the second amplified signal.